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Poor health and academic outcomes are increasingly attributed to the use of drugs and alcohol by undergraduate college students (National Institutes of Health, 2015). Currently, the health and counseling center (HCC) of a private college in the Pacific Northwest formally screens its student population for drug and alcohol use with the new patient registration health survey. Students complete the health survey the first time they access healthcare at the HCC and then once per academic year. While the healthcare providers review the completed health survey, the college has no standardized approach for addressing the students' self-reported drug or alcohol use, thus missing an opportunity to identify students who misuse or abuse drugs or alcohol. This missed opportunity to inquire more information and intervene may increase risk for negative health outcomes in these individuals.

The HCC is part of a college that has a medical amnesty policy. The medical amnesty policy doesn't require college staff to report events of student drug and alcohol use, such as opioid or alcohol overdose, to authorities outside of the college. The medical amnesty policy may support an environment for students to seek professional help when medical emergencies occur on or around campus. A formal drug and alcohol use screening protocol could offer an opportunity to further the institution's efforts to provide a safety net for at-risk students. The author of this article (the author) chose the Screening, Brief Intervention, and Referral to Treatment tool for this project (SBIRT).

Clinical Problem

The National Highway Traffic Safety Administration (NHTSA) reported in 2007 that approximately 1700 college students, between the ages of 18 and 24, die annually

from unintentional alcohol-related injuries; that 600,000 students are injured yearly while using alcohol; and that high-risk alcohol consumption negatively affects academic work. In 2015, the National Institutes of Health (NIH) found that alcohol use in undergraduate student population was associated with 97,000 reports of sexual assault, nearly 700,000 reports of physical assault, and more than 1,800 deaths. Moreover, 25 percent of undergraduate students in the United States self-reported that their personal alcohol use had negative impacts on their school performance and approximately 20 percent demonstrated behavior consistent with alcohol use disorder diagnosis criteria (NIH, 2015).

The college's current informal method of screening students for drug and alcohol use presents a missed patient care opportunity. Patient care that is delayed, late, not fully completed, or not completed at all is an error of omission known as *missed nursing care* (Agency for Healthcare Research and Quality, 2017). The Missed Nursing Care Model reports that inconsistent screening methods by healthcare providers can lead to missed or delayed beneficial patient care (Kalisch, Landstrom, & Hinshaw, 2009).

The U.S. Preventive Services Task Force (USPSTF) reported a grade B recommendation for healthcare providers to screen for risky behavior of drug and alcohol use (2013a). This recommendation states that a brief intervention aimed at decreasing harmful alcohol and drug use should be provided when the screening is positive (USPSTF, 2013a). A grade B recommendation means that the USPSTF "recommends the service" with moderate certainty that the recommendation will produce "moderate to substantial" benefits (USPSTF, 2013b). The HCC is the appropriate venue for further

improving health and academic outcomes with a formal screening and referral to treatment process.

The Substance Abuse and Mental Health Services Administration (SAMHSA) conducted a comprehensive literature review to evaluate the effectiveness of the (SBIRT) tool. The review found that the SBIRT is effective at identifying and intervening with risky behavior patterns in individuals using alcohol (SAMHSA, 2011). Evidence shows support for the use of the SBIRT tool to screen for and intervene with illicit substance and drug use (SAMHSA, 2011).

Aim and Purpose

At the college's HCC, use of the SBIRT tool will provide a formal screening, intervention, and referral-to-treatment process for drug and alcohol abusers. The aim of implementing the SBIRT tool at the HCC is to increase rates of drug and alcohol screening by providing an evidence-based formal screening tool for healthcare providers to use. The author created a protocol for the HCC primary care providers to screen, intervene, and refer patients to the mental healthcare providers located at the HCC during each patient encounter.

Innovation Description

The SBIRT is a three-part method consisting of an annual screening, brief intervention, and a referral to treatment (Massachusetts SBIRT [MASBIRT], 2012). The three-tiered approach allows healthcare professionals to identify and intervene with patients who engage in alcohol and drug use that is potentially hazardous (MASBIRT, 2012). The time needed to use the SBIRT tool during an office visit can be less than 15 minutes or longer than 30 depending on the depth of intervention conducted.

Screening

Providers at the college HCC asked patients yearly about alcohol and drug use by saying, “How many times in the past year have you had five or more drinks (four or more for women) in one day?” and “How many times in the past year have you used an illegal drug or used a prescription drug for non-medical reasons?” (MASBIRT, 2012, p. 5). An answer of one or more days to either of these questions is considered a positive response and prompts further inquiry (MASBIRT, 2012).

Brief Intervention (BI)

The provider intervened by prompting the patient to explore personal reasons for his or her drug and alcohol use. Additionally, the provider offered feedback and provided information about the risks of alcohol use depending on what the patient was agreeable to (MASBIRT, 2012). To conduct a brief intervention and further the discussion about drug and alcohol use, the providers said, “I’d like to know more about your use of [X]. Help me to understand what you enjoy about using [X]. What else?” and “Is it OK if we review some of the health risks of using X?” (MASBIRT, 2012, p. 9). At the end of the conversation, the provider asked, “Given what we have been discussing, help me better understand how you feel about making a change in your use of X. On a scale from 0 -10, how ready are you to change any aspect of your use of [X]? A 10 would mean you are fully ready to change and a 0 means you are not at all ready.” (MASBIRT, 2012, p. 10). It is recommended that the SBIRT tool be used with each patient yearly; however, each provider is able to review past progress notes saved in the electronic health record (EHR) before each patient encounter and resume intervention counseling at each visit if appropriate.

Referral to Treatment

When indicated by a positive screening, the provider was asked to present the patient with a referral to confidential treatment with the college mental health staff at the HCC. During the referral step, the provider was asked to wrap up the SBIRT session by thanking the patient for discussing a sensitive matter and creating a plan. “What can you do to stay healthy and safe? Where do you go from here?” (MASBIRT, 2012). The healthcare provider would introduce the patient to a specific mental health provider at the HCC at the end of the office visit if a referral was indicated. If there were no mental health providers available at that time, the student would be directed to the appointment scheduling personnel to create a mental healthcare appointment.

Theoretical Framework

Applying the Quality Implementation Framework (QIF) may help the success of the SBIRT tool implementation at the HCC. The QIF was developed through a synthesis of literature regarding implementation strategy and theory (Meyers, Durlak, & Wandersman, 2012). The theory uses a structured method to categorize four distinct phases to consider when creating a practice change implementation: site-specific considerations, structuring the implementation before the project starts, ongoing support once implemented, and reflection for future implementation strategy improvement (Meyers et al., 2012). Each phase has detailed subcategories to further help address potential barriers to a successful implementation. Applying the *delivery and support* subcategory of the QIF to this project shows that primary stakeholders need to have an adequate level of comfort with the SBIRT tool for a successful practice change (Meyers et al., 2012). There is also a potential barrier to successful implementation if the

providers at the clinic are not comfortable screening patients with the SBIRT tool or are not comfortable engaging in dialogue about alcohol and drug abuse. This barrier is addressed in the Staff Training section of this article.

Evidence

The author conducted a literature search based on a clinical question identified through the microsystem analysis conducted for this project. Will the use of the SBIRT tool by healthcare providers, compared to no standardized drug or alcohol use screening process, affect the rate of documented screening for alcohol and drug use and the rate of documented brief interventions during office visits among the patients at the college health center?

The terms *college alcohol use*, *undergraduate drinking*, *intervention*, *college drug use*, and *SBIRT* were used to search Elsevier (CrossRef), Health Reference Center Academy (GALE), OneFile (GALE), PubMed Central, ProQuest, Springer (CrossRef), SpringerLink Open Access, and SAGE Journals databases. The author accessed the databases using the online library search queries of the University of Portland (UP) and the Oregon Health and Sciences University (OHSU) (UP = 309 articles and OHSU = 267). The author kept peer-reviewed and available online articles that pertained to drug and alcohol use on college campuses and SBIRT use (UP = 139 and OSHU = 214) and the author discarded the others. The author further sorted articles for relevance of title to the clinical question or focus on SBIRT with tracked referral rates. The author dismissed articles that did not meet the aforementioned criteria.

The author selected seven peer-reviewed articles for in-depth review; they are summarized in an evidence table in Appendix A and a synthesis table in Appendix B. An

article by Babor et al. (2007) focused primarily on an SBIRT tool screening carried out in primary care offices with a population reporting mild to moderate substance abuse behavior. Glass et al. conducted a systematic review of 13 randomized control trials (RCTs) and found no significant increase in specialty treatment use after a brief intervention (2015). However, another systematic review that included five RCTs reported a statistically significant increase in treatment use and decrease of alcohol consumption at 12 months and 18 months post-brief intervention (Simioni, Cottencin, & Rolland, 2015). Brief interventions have been shown to decrease rates of risky behavior with alcohol use (Madras et al., 2009; Mitchell et al., 2012; SAMHSA, 2011). The evidence found in these articles supports the use of the SBIRT to increase the rate of brief interventions for drug and alcohol use (Babor et al., 2007; Glass et al., 2015; Simioni et al., 2015). A literature review by Agerwala and McCance-Katz found that SBIRT use was associated with decreased frequency and amount of alcohol consumed when used in a primary care setting (2012). For application at the HCC, the brief intervention portion of the SBIRT offers an opportunity for healthcare providers to routinely intervene with the students. A cohort study of high school and middle school students found significant reduction in the rate of reported drug and alcohol use six months after the SBIRT was conducted (Mitchell et al., 2012). The Glass et al. (2015) and Simioni et al, (2015) articles guided the focus of this project to track the rate of brief interventions conducted as a project outcome. Lastly, McCambridge, McAlaney, and Rowe found that heavy alcohol use in late adolescence is associated with alcohol dependence and harmful health outcomes in adulthood (2011). The literature review supports the use of the SBIRT tool as formal drug and alcohol use screening tool to decrease risky behavior with drug and

alcohol use. Therefore, the question that guided this project is this: Will the use of the SBIRT tool by healthcare providers, compared to no standardized drug or alcohol use screening process, affect the rate of documented screening for alcohol and drug use during office visits among the patients at the college health center? Additionally, will the rate of documented brief interventions increase as well?

Implementation Plan

Theoretical Framework

The QIF guided two major themes to support the initial implementation of the SBIRT tool at a college HCC: formal commitment and staff training pre-intervention support (Meyers et al., 2012). The author obtained formal commitment from major stakeholders such as the clinic manager, healthcare providers, and the medical director prior to the start of the implementation. The author gave the healthcare providers an online module that is supported by the SAMHSA prior to the start of this project (Meyers et al., 2012). Implementation of project at the HCC included a structured protocol for how to conduct each step of the SBIRT tool as outlined by best practice methods from SAMHSA.

Formal Commitment

The QIF finds that stakeholders with the authority to stop or alter a practice improvement project need to be considered and they need to express explicit buy-in. To create an environment of transparency and assure that all major stakeholders were supportive of this project, the author obtained approval to use the SBIRT tool with the student population of the college health center. The QIF states that approval of a project

by clinic leaders increases long-term success of an implementation (Meyers et al., 2012). Both the clinic medical director and clinic manager of the HCC approved this project.

The author asked the medical director and clinic manager for formal approval via the signed document consenting to the implementation of the SBIRT tool at the college HCC (see Appendix C). To support the use of the SBIRT tool as a new policy for formal drug and alcohol screening, the medical director needed to thoroughly understand the implications of using the SBIRT tool with the patient population. To help explain and gain formal approval, the author provided a document created by the Colorado Clinical Guidelines Collaborative (2008) titled, "Frequently Asked Questions by Healthcare Providers," to the medical director and the clinic manager (see Appendix D). The clinic manager acted as the liaison between the college academic office and the HCC to request authorization of this project.

Staff Training

The QIF calls for giving consideration to the details of staff training on a particular practice change implementation before the project go-live date (Meyers et al., 2012). Details about staff training include background and how the implementation plan will provide the skills needed for staff to become competent (Meyers et al., 2012). The free online tool, *Substance Use in Adults and Adolescents: SBIRT*, published by Medscape, was used to train the providers on the SBIRT tool. The providers at the HCC were required to use this training tool before the practice change implementation went live to provide them with the level of pre-intervention confidence needed for successful implementation (Meyers et al., 2012). The training incorporates vital aspects of effective staff education: information about clinical trials that support the efficacy of the SBIRT

tool, detailed description of each staff member role, structured brief intervention and treatment methods, and how to refer patients to mental health treatment at the HCC (SAMSHA, 2013). By providing background information and education on how to use the SBIRT tool prior to implementation, the providers should have a higher level of buy-in compared to no pre-implementation training (Meyers et al., 2012). Additionally, the *Substance Use in Adults and Adolescents: SBIRT* online training tool offers continuing medical education credits for the healthcare providers who complete the training (Ahadpour et al., 2017).

Implementation Resources

When the HCC implemented the SBIRT tool, the healthcare providers were able to reference SBIRT tool placards. The author placed the placards in each patient room and at each work station that healthcare providers use for charting patient encounter notes into the EHR. The placards summarized list of the SBIRT tool with sample questions for the healthcare providers to use. The information on each placard was from the Quick Approach section of the *SBIRT: A Step-By-Step Guide* (Massachusetts Screening, Brief Intervention and Referral to Treatment, 2012, pg. 8).

The author created a template with Microsoft Word for providers to use to ensure detailed and trackable charting of the SBIRT tool. The template contained prompts for charting: time spent discussing alcohol and drug use, intervention provided, referral to treatment made, and a brief note on where to resume with the next office visit (SAMHSA, 2013). The clinical manager saved the Word document to the desktop screen of each computer the providers used to allow the prompt to be copied and pasted into a patient chart.

Evaluation Plan

To evaluate the efficacy of the SBIRT tool use at a college HCC, the author conducted a pre- and post-implementation EHR chart audit. The author audited patient EHR charts from eight weeks before and eight weeks after the go-live date. A Joint Commission guideline was used to determine the number of charts that were audited: If there were fewer than 30 patient encounters during the data collection period, all records would be reviewed; if there were between 30 and 75 patient encounters, 30 records plus 10% of the total number of records would be audited; if there were more than 75 patient encounters, an audit of 75 patient encounters would be conducted (The Joint Commission, 2017). SAMSHA supported tracking rates of the SBIRT tool brief interventions by providers through the auditing of progress notes as a method for assessing outcomes (2013).

To provide ongoing support to the implementation, the author sent emails that asked if the participants had any questions or feedback every three weeks once the project went live. SAMHSA reported that directly asking staff to provide feedback and input regarding the SBIRT tool implementation is a useful evaluation method (2013). The author let staff know that in-clinic appointments could be made with the author to answer questions or to work through the SBIRT tool as personal schedules allowed. At the conclusion of the data collection process, the author transferred project management to the clinical manager of the HCC.

Implementation

The author met in-person with the medical director and the clinical manager of the HCC two weeks prior to the go-live date of the project. During this meeting, we

discussed the details and expectations of the project. The author sent an introduction letter via email to the healthcare providers at the HCC one week before the project started. The clinical manager distributed consent forms for the healthcare providers to sign a week before the project started. The welcome letter detailed the significance of the project, how to contact the author with questions, and explained how to use and chart on the SBIRT tool. The author asked the healthcare providers to complete an online SBIRT training module prior to the go-live date (Ahadpour et al., 2017). The project started on September 26, 2018 and concluded on November 21, 2018. The author asked healthcare providers to participate in the project during all hours of their routine work during the eight weeks of the project. Printed SBIRT tool placards (Rush University, n.d.) and charting templates for charting were placed at each computer the day the project. Additionally, flyers were distributed with resources for local and national mental health and substance abuse programs throughout the HCC for patients to access. The author sent an email to the healthcare providers every three weeks during the implementation to solicit questions and encourage use of the SBIRT tool. After the conclusion of the project, the author emailed feedback surveys to all providers who participated.

Ethical Considerations

The SBIRT tool asks patients about personal drug and alcohol use. Individuals may feel uncomfortable answering the question on the SBIRT tool prompt. Further, in the setting of a college HCC, students may worry that professors or parents will learn about any information they divulge. To counter this ethical consideration, the students were told they could decline to answer any questions or ask to not talk about drug and alcohol use at any time.

This project could increase the length of each client encounter. Patients are typically scheduled for 20 minutes with a healthcare provider when they schedule an appointment. The use of the SBIRT tool could take time away from the patients' primary reason for making that appointment; however, the benefit of a formal screening process should outweigh the time consideration. The evidence shows that this tool can decrease rates of risky drug and alcohol use among the patient population (Agerwala & McCance-Katz, 2012; McCambridge et al., 2011; Mitchell et al., 2012; Simioni et al., 2015).

Results

Of 75 audited charts before the intervention, three included drug or alcohol screening notes and one mentioned a brief intervention regarding drug use. There were 15 instances of drug and alcohol screening charted during the intervention and nine occurrences of a brief intervention charted.

The author completed a chi square analysis to evaluate the association between the use of a formal drug and alcohol screening tool and no use of formal drug and alcohol screening to the frequency with which healthcare providers document a brief intervention regarding drug and alcohol use during a patient encounter. The alpha value was set at 0.01, consistent with recommendations of an alpha value with this type of research (Schumm, Pratt, Hartenstein, Jenkins, & Johnson, 2013). The results showed a significant association between the implementation of a formal screening tool and documentation rates of BI ($x^2 (1) = 6.92$, $p<0.01$) and documentation rates of screening for alcohol or drug use ($x^2 (1) = 9.09$, $p<0.01$).

Data from the surveys sent to the healthcare providers using the SBIRT tool revealed a complication relating to screening for risky behavior by gender the student

population at the HCC. The SBIRT tool allows more drinks per day for males than females when screening for risky levels of alcohol consumption. Not all students at the HCC identity as male or female, or identify as the sex reported on a birth certificate. Future research may provide a solution for this problem.

Summary and Implications

A greater proportion of chart notes during the period of SBIRT tool use had documentation of a BI for drug and alcohol use when compared to chart notes during a period with no formal screening tool in use (8-weeks prior to this project). There was a statistically significant higher rate of drug or alcohol use screening documented in chart notes during this implementation when compared to an equal period before implementation. As the evidence reported, increasing rates of drug and alcohol screening along with rates of brief intervention have been shown to decrease hazardous behavior and benefit those individuals in the long term.

The data do not reflect occurrences of drug or alcohol screening that may have happened via conversations that were undocumented prior to this project. However, documentation of work completed by healthcare professionals is important for consistent and reliable healthcare delivery.

Lessons Learned

Buy-in from individual staff members is difficult to achieve in real-world situations. The microsystem assessment did not capture the willingness of participants to carry out the proposed practice change. Positive results for screening documentation occurred in only a portion of all healthcare providers who participated. A few participants did not document any SBIRT use during the project. This may be due to the sample size

and random selection of charts. However, communication via email instead of face to face may have influenced participant motivation.

The ability to change and adapt during the preparation and implementation phases is important to a successful project. Staff members at the HCC changed clinical roles and two individuals left the clinic during the preparation and implementation phases. The author adapted the project to the most current needs of the clinic after the initial planning phase and before the implementation. A useful way to update a project is to meet with individuals who influence the success of the project (clinical manager and medical director for this project) to best understand the expectations of new staff members.

Sustainability Plan

The QIF states that an important aspect of practice change is ongoing evaluation of the project by those directly affected or implementing the change (Meyers et al., 2012). The input received from the healthcare provider feedback survey in this instance was incorporated with an executive summary of the project. The author distributed the executive summary to the HCC clinical manager, medical director, and all healthcare providers involved. The aim was to show that staff who use a formal screening tool both increase rates of screening and brief intervention.

Conclusion

The author identified a need to standardize drug and alcohol use screening at the HCC through a microsystem assessment and from staff input. There is evidence to support the use of the SBIRT tool as a method to decrease rates of risky drug and alcohol use and to improve long-term outcomes of patients by increasing screening and BI rates. The results of implementing a formal screening tool for drug and alcohol use were

statistically significant. The implementation of the SBIRT tool increased rates of both screening for drug and alcohol use and occurrences of BI during office visits. The outcome of this project supports the use of the SBIRT tool at a college health center.

Based on the results of this project, meeting with individual participants in person may help future projects to succeed. While the results were significant, there might have been higher rates of screening and BI if the participants had been encouraged in person instead of through email communications to use the tool. A further evaluation of evidence-based methods to increase participation in a similar project could be of benefit to future research.

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Appendix A

Evidence Table

Citation	CF or TF	Design	Sample Setting Characteristics	IV DV and definitions	Metrics	Data analysis	Results	LOE Strengths Limitations Applicability
Simioni, N., Cottencin, O., & Rolland, B. (2015). Interventions for increasing subsequent alcohol treatment utilisation among patients with alcohol use disorders from somatic inpatient settings: a systematic review. *Alcohol and Alcoholism*, *50*(4), 420-429.	CF	SR	RCT articles published before December 2013 DB: PubMED, PsycINFO & Cochrane Library Data pulled by one person, reviewed by second; third reviewer blinded to other reviewers to settle discrepancies	IV1: IBIPS IV2: no IBIPS IBIPS similar to BI with RT	I-Squared statistic used then quantitative synthesis	8.3 vs. 2.1%, P = 0.01 [OR = 4.2, 95%, CI = 1.4–12.4] 14 vs. 4%, P = 0.02 [OR = 3.9, 95%, CI = 1.2–10.7] P = 0.01	2 RCT found sig usage of tx at 12 months from IBIPS & at 18 months sig decrease in ETOH consumption w/ higher n of tx sessions	LOE: 1 Strengths: thorough methods explanation, detailed application, stats and sig provided, 3rd party reviewer blinded to SR authors Limitations: authors altered core question d/t lack of RCT's, used quantitative synthesis analyze certain data

			5030 records, 1026 duplicated removed, 4004 screened, 3942 removed, 62 eligible, 57 excluded, 5 RCTs used, 113 participants				sig increase in specialty tx as increase in intervention sessions	Applicability: useful to apply the RCT data to the specifics of best utilizing RT
Citation	C For TF	Design	Sample Setting Characteristics	IV DV and definitions	Metrics	Data analysis	Results	LOE Strengths Limitations Applicability
Glass, J. E., Hamilton, A. M., Powell, B. J., Perron, B. E., Brown, R. T., & Ilgen, M. A. (2015). Specialty substance use disorder services following brief alcohol intervention: a meta-analysis of randomized controlled trials. *Addicti*		SR	PRISMA criteria used MEDLINE, PsycINFO & CINAHL Plus articles published in English before 7.27.2013	DV1: "referral-specific efforts" IV: n of ETOH treatment	BI not sig associated with population I-Squared Statistics Pooled results	*n* = 993 and *n* = 937 intervention and control group participants 0% heterogeneity RR = 1.08, 95%	No evidence to support BI is effective to increase ETOH-related Tx or care Evidence to support adapti	LOE: 1 Strengths: methods well explained for reproduction, for DV1 table 3 in article reports detailed variables and outcomes of each study reviewed

on, *110*(9), 1404-1415.			676 abstracts screened, 565 excluded, 111 full text screened, 98 excluded, 13 included in final review		to one study arm (n=5) show no sig	CI = 0.81–1.43	on of SBIRT training to a specific clinic to increase the rate of BI by clinicians.	Limitations: limited RCT directed at Tx utilization post BI, only English papers, some RCTs used has control groups that were provided resources for Tx Applicability: evidence against effect of BI on Tx utilization, not undergraduate age specific population, mostly adult population w/ injuries or known ETOH misuse/problems. Evidence to guide focus of

								SBIRT use to increasing rates of BI as a way to increase positive health outcomes by decreasing ETOH use.
Citation	CF or TF	Design	Sample Setting Characteristics	IV DV and definitions	Metrics	Data analysis	Results	LOE Strengths Limitations Applicability
Babor, T. F., McRee, B. G., Kassebaum, P. A., Grimaldi, P. L., Ahmed, K., & Bray, J. (2007). Screening, Brief Intervention, and Referral to Treatment (SBIRT) toward a public health approach to the management of substance abuse. *Substance abuse*, *28*(3), 7-30.	CF	Literature review article	Methods are not clearly stated Articles reviewed range from 1982 to 2007 144 cited articles Primarily from PCP offices BT: from 2 or	Core components of SBIRT outlined in intro section DV1: BT DV2: no immediate BT s/p BI IV: rate of ETOH/drug	Authors subjective review of articles for data extraction	Subjective to author discretion	BT found to be more effective than waitlists for intensive treatment programs and can suit a broad patient population Most research targete	LOE: 4 Strengths: wide range of study publication dates, identified gap in literature for SBIRT use to increase access to treatment, published in a peer-reviewed journal supported by AMERS

			greater sessions of therapy	depen dence			d at outpati ent mild to moder ate substa nce abuse patient s	A, ISAM & INCASE Limitatio ns: No clear or systemati c explanati on of the methods used to repeat the literature review available, poor definition s of criteria for selections of articles for review Applicabi lity: a reference to specific and focused articles for support of ongoing research
Citation	C F o r	Desig n	Sample Setting Charact eristics	IV DV	Metrics	Data analysi s	Result s	LOE Strengths Limitatio ns

	TF			and definitions				Applicability
Agerwala, S. M., & McCance-Katz, E. F. (2012). Integrating screening, brief intervention, and referral to treatment (SBIRT) into clinical practice settings: a brief review. *Journal of psychoactive drugs*, *44*(4), 307-317.	CF	Literature review	83 references cited Literature from emergency departments, primary care, office based clinics and community settings	DV1: SBIRT use DV2: SBI use DV2: No SBIRT/SBI use IV: rate of ETOH use	Authors subjective review of articles for data extraction	Subjective to author discretion	In primary care: SBI produced a reduction in frequency of ETOH and drug use 6 months after intervention; BT and RT associated with reduced ETOH and drug use, SBIRT tool reported to be successful as method to conduct BI, BT & RT	LOE: 4 Strengths: shows evidence to support the use of SBIRT as an effective tool to decrease alcohol consumption for patients in outpatient and primary care settings. Limitations: No clear or systematic explanation of the methods used to repeat the literature review available Applicability: a reference to specific

								and focused articles for support of ongoing research
Citation	C F o r T F	Design	Sample Setting Characteristics	IV DV and definitions	Metrics	Data analysis	Results	LOE Strengths Limitations Applicability
McCambridge, J., McAlaney, J., & Rowe, R. (2011). Adult consequences of late adolescent alcohol consumption: a systematic review of cohort studies. *PLoS medicine*, *8*(2)		Systemic review	General population cohorts of ages 15 to 19 years old with or without documented sequela after the age of 20	Varies between studies reviewed	Authors subjective review of articles for data extraction	Subjective to author discretion	Evidence reports heavy alcohol use in late adolescence often extends into adulthood and is associated with alcohol dependence in adulthood	Level I Strengths: half of studies evaluated from US and school based Limitations: potential for researcher bias; results are based on self-reporting Applicability: supports the need for a formal, standardized drug and

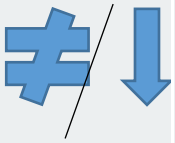
								alcohol use screening tool to improve health outcomes
Citation	C F o r T F	Desig n	Sample Setting Charact eristics	IV DV and definit ions	Metrics	Data analysi s	Result s	LOE Strengths Limitatio ns Applicabi lity
Madras, B. K., Compton, W. M., Avula, D., Stegbauer, T., Stein, J. B., & Clark, H. W. (2009). Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: comparison at intake and 6 months later. *Drug & Alcohol Dependence*, *99*(1), 280-295.	C F	Seco ndary analy sis	Inpatien t & outpatie nt settings, univers al screenin g, adults and adolesc ents, urban and rural settings	IV: BI, brief tx, or referra l to specia lty DV: screen ed with SBIR T	GPRA tool, rates of tx, interve ntions, and referral s tracked , questio nnaire at 6 months s/p interve ntion used	P <0.001,	22.7% screen ed positiv e for heavy ETOH use at time of interve ntion, 12% at 6 month follow up	Level II Strengths : large n Limitatio ns: results are based on self-reporting, no universal screening prompt used Applicabi lity: SAMHS A materials used that are publicall y available
Citation	C F o	Desig n	Sample Setting	IV DV	Metrics	Data analysi s	Result s	LOE Strengths

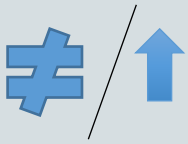
	r T F		Charact eristics	and definit ions				Limitatio ns Applicabi lity
Mitchell, S. G., Gryczynski, J., Gonzales, A., Moseley, A., Peterson, T., O'Grady, K. E., & Schwartz, R. P. (2012). Screening, brief intervention, and referral to treatment (SBIRT) for substance use in a school-based program: services and outcomes. *The American journal on addictions*, *21*(s1).	C F	Coho rt study , pre-post test	From 2005 – 2008, 13 school based health clinics in NM, 15 BHCs, 12 HS, 1 MS,	IV: SBIR T use DV: rates of report ed substa nce use s/p IV	GEE, GPRA tool	$\chi 2$ (1) = 17.57; $p < .001$) $\chi 2$ (1) = 4.92; $p < .05$	Sig decrea se in drug use at 6 month s Sig decrea se ETOH use	Level IV Strengths : direct use of SBIRT with BI, BT, and or RT, adolescen t populatio n Limitatio ns: no control group, self-reporting used to gather data Applicabi lity: The Mitchell et al., interventi on is similar in design to the interventi on for this DNP Project
Abbreviations: AMERSA – association for medical education and research in substance abuse; BD – data base; BHCs – behavioral health counselors; BI – brief intervention; BT – brief treatment; CF – conceptual framework; d/t – due to; DV – dependent variable; ETOH – alcohol; GEE – generalized estimating equations; GPRA – government performance								

and results act questionnaire; HS – high school; IBIPS – inpatient BI with post-discharge booster session; INCASE – international coalitions for addiction studies in education; ISAM – international society of addiction medicine; IV – independent variable; LOE – level of evidence; MS – middle school; n – number; NM – New Mexico; PCP – primary care provider; PRISMA – preferred reporting items for systematic reviews and meta-analysis; RT – referral to treatment; SBI – screening & brief intervention; Sig – significant; SR – systematic review; SP – status post; Tx – treatment; W/ - with

Appendix B

Evidence Synthesis Table

Article	Population	Duration of Study	Intervention	Success of Intervention	Level of Evidence
Interventions for increasing subsequent alcohol treatment utilization among patients with alcohol use disorders from somatic inpatient settings: a systematic review	Adults	Articles published prior to 2013	Review of BI methods, including SBIRT, to increase use of ETOH treatment programs.		Level I
Improving Clinic Productivity through a Shared Medical Appointment	Adults	Articles published prior to 2013	Assess rate of treatment use after BI and RT		Level I
Screening, Brief Intervention, and Referral to Treatment (SBIRT) Toward a Public Health Approach to the Management of Substance Abuse	Adults	1982 – 2007	SBIRT use to evaluate how BI/BT effects rates of ETOH use		Level IV

Integrating, Screening, Brief Intervention, and Referral to Treatment (SBIRT) Into Clinical Practice Setting: a Brief Review	Adults	1983-2012	SBIRT use compared to no standardized ETOH screening and intervention tool in emergency department, primary care and other outpatients settings		Level IV
Adult consequences of late adolescent alcohol consumption: A systematic review of cohort studies	Adolescents	1964-2008	Assess long term sequela of adolescent alcohol use		Level I
Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and 6 months later	Adolescents & Adults	Not specified	Use SBIRT at an initial patient encounter, track rates of drug use at the initial encounter and 6 months post SBIRT use		Level II

Screening, Brief Intervention, and Referral to Treatment (SBIRT) for Substance Use in a School-Based Program: Services and Outcomes	Adolescents	2005-2008	Use of SBIRT to track rates of drug and alcohol use based on the intensity of intervention used.		Level IV

Appendix C

Memorandum of Understanding
Between University of Portland School of Nursing (SON) Doctor of Nursing Practice program and
Clinical site where student plans to do the Practice Improvement Project

Purpose: To exchange contact information and expectations among the DNP student, the faculty advisor for the project, and the organization's project supervisor; and to describe the responsibilities of the organization's project supervisor at the clinical agency. **Students may only identify the agency in oral or written communications with the written permission of the agency.** The agency designates who may sign the MOU. Faculty retain a copy of the completed MOU to file with the University of Portland Graduate Coordinator.

Student information:

Name:
Phone: (work) **Cell:** **Home:**
Preferred email:

Faculty advisor:

Name:
Phone: (work) **Cell:**
Preferred email:
SON fax: 503-943-8680

Organization's onsite project supervisor's information:

Name:
Credentials (Title, degrees)
License: Yes/No **Discipline:**
Preferred phone (Cell):
Preferred email:

Name of the Agency
Agency Address:
City, State, Zip
Agency Phone:
Agency Fax number

Responsibilities of the DNP Student Project Manager:
(list what you will be doing – phrases, concise)

Responsibilities of the Organization's Project Supervisor:

1. Assists the student(s) to select a feasible project that meets the agency's needs and that is appropriate to the Doctor of Nursing Practice program; most projects should be able to be completed within 6-9 months.
2. Assists the student(s) with understanding the organization, approval processes, stakeholders and resources, and with managing any challenges that may arise.
3. Provide feedback to the student(s) and faculty on the implementation of the project and the students' abilities to design, implement and evaluate the project.
4. Facilitate completion of the project in a timely way.

_____ _____

Signature of Clinic Director or Person Designated by Agency Date

_____ _____

Signature of Project Supervisor Date

_____ _____

Signature of Faculty Advisor Date

_____ _____

Signature of Student Date

Appendix D

Guideline for Alcohol and Substance Use Screening, Brief Intervention, Referral to Treatment

Frequently Asked Questions by Healthcare Providers

How can I easily incorporate this into my office? How long does it take?

You can include a few brief screening questions in a written health history questionnaire completed by every patient once a year. The clinic assistants can be trained to review the responses and identify those patients with positive initial screens, who are then given a written self-report to complete in the exam room while waiting to be seen by the provider. This part of the process takes 5 minutes or less. Depending on the severity of the problem revealed by the questionnaire, the provider will spend varying amounts of time discussing the results with the patient. If substance use is potentially a major factor in the patient's current medical condition (e.g., depression, liver disease), then the provider should spend more time on the intervention. However, if the medical problem is seemingly unrelated to substance use, merely remarking about the results and making a suggestion for healthier habits may be sufficient.

Can I get reimbursed for my time talking with the patient?

Medicare created two new G codes to allow providers to bill for alcohol and drug assessment (G0396 – about $22 for 15-30 minutes) and brief intervention (G0397-about $55 for more than 30 minutes). The American Medical Association has approved two CPT codes (based on time devoted to the service): 99408 and 99409. Use of these codes requires documentation in the clinical record. Code 99408 is for alcohol and/or substance (other than tobacco) abuse structured screening (e.g., AUDIT, DAST), and brief intervention (SBI) services lasting 15-30 minutes. Code 99409 is for services greater than 30 minutes. Services provided under codes 99408 or 99409 are separate and distinct from all other Evaluation & Management (E/M) services performed during the same clinical session (i.e., date of service). For more information on reimbursement, go to http://www.ensuringsolutions.org. Behavioral health and primary healthcare stakeholders are advocating that screening and brief intervention be covered by Colorado Medicaid.

How effective is self-report screening?

While not all patients will answer screening questions honestly, more than 25 years of research in medical settings has shown that most patients are comfortable answering questions about their substance use and respond honestly about their use. Those who do respond honestly and report hazardous or harmful substance use are more likely to be open to brief intervention and treatment. While screening may not identify every patient at risk, it is useful for identifying those at risk who are open to intervention. Self-report screening using a validated instrument is quick, accurate and inexpensive and can be administered orally or by paper or computer.

How effective is brief intervention?

Since 1980 over 50 clinical trials of single 3-5 minute to multiple 15-30 minute sessions have shown decreased use among many patients who receive a brief intervention. A brief intervention or brief motivational conversation is usually most effective with at-risk patients who are not addicted (those with hazardous or harmful use). In some cases, simply educating patients about the health risks of their substance use has

led to behavior change. Brief interventions are low cost, quick, patient friendly, easy to do, and staff of various levels can learn how to conduct a brief intervention.

When should I recommend abstaining versus cutting down?

You should recommend abstention whenever it is medically necessary (e.g., medication contraindication). However, it is important to recognize when this goal seems too overwhelming to the patient and offer cutting down gradually as a means to getting to abstention. For other patients, whose use is not absolutely contraindicated, cutting down may be a more realistic option. For example, a young man in his early 20s admitted during his interview that he was not happy with his pattern of drinking up to 10 drinks every time he went to a party. He set his own goal of limiting himself to 4 drinks and was encouraged that this change alone would have a positive impact on his health.

What is "brief therapy"?

The brief therapy model is client-centered, client-directed therapy consisting of 2-12 sessions. The model is targeted toward those clients who are already considering a change and who need support in setting and meeting goals. A brief therapy provider may be a LCSW, CAC/LAC, LPC or RN and sessions can be as short as 15 minutes in person or over the telephone. Many clients who refuse traditional therapy because of financial or time limitations find brief therapy quite effective.

How do I refer a patient to brief therapy or treatment?

Determine the availability of behavioral health resources in your community and identify a suitable provider of brief therapy or specialized services. Have a list of potential referral sources available before you begin screening so that you will feel assured that treatment is available for any problems you uncover. For help locating a provider who specializes in substance use treatment, go to www.cdhs.state.co.us/adad or call (303) 866-7480.

Developed on 07/15/2008. For more information, go to www.coloradoguidelines.org or call (720) 297-1681.